CLAIMS

What is claimed is:

1. A method comprising preparing a composition combining a solid elastomer, an organic peroxide initiator, and a metal carboxylate; and curing the composition under open surface molding conditions so as to produce a molded vulcanized elastomer composition with low tack to tack-free surface.

2. The method of claim 1 wherein the solid elastomer is selected from the group consisting of ethylene-propylene diene rubber (EPDM), nitrile rubber (NBR), polychloroprene (CR), hydrogenated NBR (HNBR), styrene-butadiene rubber (SBR), polybutadiene rubber (BR), ethylene-propylene copolymer (EPM), fluoroelastomers (FKM), silicone rubber (MQ, VMQ), acrylic rubber (ACM), Acrylonitrile-butadiene-styrene (ABS), polyethylene (PE), chlorosulfonated polyethylene (CSM), chlorinated polyethylene (CM) (also known as CPE), natural polyisoprene (NR), synthetic polyisoprene (IR), and ethylene-vinyl acetate (EVA).

3. The method of claim 1 wherein the organic peroxide is selected from the group consisting of dialkyl and peroxyketal peroxides.

4. The method of claim 1 wherein the metal of the metal carboxylate is selected from the group consisting of cobalt, zirconium, manganese, zinc, iron, aluminum, and tin.

5. The method of claim 1 wherein the metal carboxylate is a cobalt carboxylate.

6. The method of claim 5 wherein the cobalt carboxylate is a cobalt salt of a C_2 to C_{20} fatty acid.

7. The method of claim 6 wherein the cobalt carboxylate is selected from the group consisting of cobalt neodecanoate, cobalt proprionate, cobalt naptheneate, and cobalt octoate.

8. The method of claim 1 wherein a cross-linking monomer is combined with the elastomer prior to curing.

9. The method of claim 1 wherein the composition comprises about 0.1 to 10 parts by weight per hundred metal carboxylate.

10. The method of claim 1 wherein the curing conditions are selected from the group consisting of open hot air, open steam, open salt bath, and open sand bath.

11. The method of claim 1 wherein the composition comprises about 0.2 to 5 parts by weight per hundred metal carboxylate.

12. The method of claim 1 wherein the metal carboxylate is selected from the group consisting of metal neodecanoate, metal proprionate, metal naptheneate, and metal octoate.

13. The method of claim 1 wherein the metal carboxylate is dissolved in a crosslinking coagent and the resultant solution and the organic peroxide initiator are blended with the elastomer to form the composition.

14. The method of claim 13 wherein the solution of metal carboxylate in cross-linking coagent comprises about 5 to 25% metal carboxylate

15. The method of claim 13 wherein about 2 to 20 parts by weight of the solution is blended with 100 parts by weight of the elastomer.

16. The method of claim 13 wherein the cobalt carboxylate is cobalt neodecanoate, the cross-linking coagent is trimethylol propane trimethacrylate (TMPTM), the elastomer is EPDM, and the peroxide is dicumyl peroxide.

17. The method of claim 16 wherein the curing is effected with hot air on an open surface.

18. The method of claim 17 wherein the curing is effected with hot air at 130° to 200° C.

19. A cross-linked, vulcanized elastomer having low tack or tack free surface prepared by the open surface curing process of claim 16.

20. An article prepared by the process of claim 16.

21. A vulcanized elastomer prepared by the open surface curing process of claim 1.

22. An article prepared by the open surface molding process of claim 1.

23. A composition comprising solid elastomer, an organic peroxide initiator, and a metal carboxylate, suitable for molding to form articles.